Atty. Dkt. No. 29250-001073/US Lucent Ref.: 125810/Liu 21

What is claimed is:

1. A method of aligning a plurality of physical channels, comprising:

aligning at least two physical channels based on a timing offset, said at least two channels transmitted over an uplink at a time instant different than that of a third physical channel.

- 2. The method of claim 1, wherein said aligning step includes synchronizing subframe boundaries of subframes of said at least two uplink physical channels so that said subframes are transmitted in the uplink at the same time instant.
- 3. The method of claim 2, wherein said subframes of said at least two channels are transmitted in the uplink so as not to overlap with uplink transmission of a subframe of said third channel.
- 4. The method of claim 1, wherein

said at least two physical channels includes a control channel configured to support enhanced uplink (EU) services and a data channel configured to support enhanced uplink (EU) services, and

said third physical channel is a control channel configured to support high speed downlink packet access (HSPDA) services.

- 5. The method of claim 4, wherein said timing offset prevents said control channel configured to support enhanced uplink (EU) services from being transmitted in the uplink at the same time as said high-speed control channel configured to support high speed downlink packet access (HSPDA) services.
- 6. The method of claim 1, wherein said timing offset is a timing offset to align subframes of a shared control channel (SCCH) with a start of a plurality of subframes of a common control channel that is used as a timing reference for all

Atty. Dkt. No. 29250-001073/US Lucent Ref.: 125810/Liu 21

physical channels received in the downlink or physical channels to be transmitted in the uplink.

- 7. The method of claim 6, wherein the SCCH is configured to provide control signaling in the downlink to support enhanced uplink (EU) services.
- 8. A method of multiplexing a plurality of physical channels for uplink transmission, comprising:

aligning at least two physical channels based on a timing offset so that said at least two channels are transmitted in the uplink at a time instant different than a time of uplink transmission for a third physical channel, and

code multiplexing said at least two physical channels with additional physical channels other than said third physical channel at said different time instant to generate a code-multiplexed signal to be used for uplink transmission.

- 9. The method of claim 8, wherein said aligning step includes synchronizing subframe boundaries of subframes of said at least two uplink physical channels so that said subframes are transmitted in the uplink at the same time instant.
- 10. The method of claim 9, wherein said subframes of said at least two channels are aligned for code multiplexing in the uplink so as not to overlap with uplink transmission of a subframe of said third channel.

11. The method of claim 8, wherein

said at least two physical channels includes a control channel configured to support enhanced uplink (EU) services and a data channel configured to support enhanced uplink (EU) services, and

said third physical channel is a control channel configured to support high speed downlink packet access (HSPDA) services.

- 12. The method of claim 11, wherein said timing offset prevents said control channel configured to support enhanced uplink (EU) services from being transmitted on the uplink at the same time as said high-speed control channel configured to support high speed downlink packet access (HSPDA) services.
- 13. The method of claim 8, wherein said timing offset aligns a subframe of a shared control channel (SCCH) with a start of a plurality of subframes of a common control channel that is used as a timing reference for all the physical channels received in the downlink or physical channels to be transmitted in the uplink.
- 14. The method of claim 13, wherein the SCCH is configured to provide control signaling in the downlink to support enhanced uplink (EU) services.
- 15. A method for scheduling transmission of a plurality of physical channels in the uplink, comprising:

assigning timing offset information to a user for aligning at least two physical channels to be transmitted in the uplink at a time instant different than a time of uplink transmission for a third physical channel.

16. The method of claim 15, wherein

said at least two physical channels includes a control channel configured to support enhanced uplink (EU) services and a data channel configured to support enhanced uplink (EU) services, and

said third physical channel is a control channel configured to support high speed downlink packet access (HSPDA) services.

17. The method of claim 16, wherein said timing offset prevents said control channel configured to support enhanced uplink (EU) services from being transmitted in the uplink at the same time as said high-speed control channel configured to support high speed downlink packet access (HSPDA) services.

Atty. Dkt. No. 29250-001073/US Lucent Ref.: 125810/Liu 21

18. The method of claim 15, wherein said timing offset aligns a subframe of a shared control channel (SCCH) with a start of a plurality of subframes of a common control channel that is used as a timing reference for all the physical channels received in the downlink or physical channels to be transmitted in the uplink.

- 19. The method of claim 18, wherein the SCCH is configured to provide control signaling in the downlink to support enhanced uplink (EU) services.
- 20. A method of avoiding an increase in peak-to-average power ratio if multiplexing a plurality of physical channels for uplink transmission, comprising:

aligning at least two physical channels based on a timing offset so that said at least two channels are multiplexed to be transmitted in the uplink at a time instant different than a time of uplink transmission for a third physical channel.